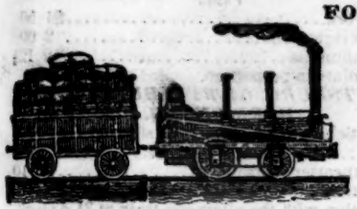
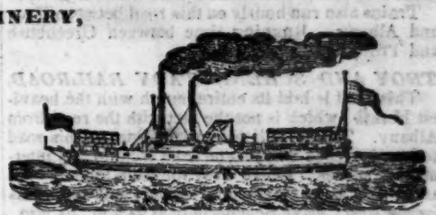
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY, AND MINES.



ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 105 CHESTNUT STREET, PHILADELPHIA, AT FIVE DOLLARS PER ANNUM.

SECOND QUARTO SERIES, VOL. II., No. 49] SATURDAY, DECEMBER 5, 1846. [WHOLE No. 546, VOL. XIX.

☞ **REMOVAL.**—It is respectfully requested that all *letters, exchange papers and periodicals*, for the RAILROAD JOURNAL, may be sent to PHILADELPHIA, as the Journal will hereafter be published there, and the office will be kept at the FRANKLIN HOUSE, No. 105 Chestnut street.

☞ It has required more time than we anticipated to effect the removal and arrangement of our office, consequently this number and the *next* also, will be somewhat delayed, but we hope to get arranged and up to time soon.

☞ Those subscribers who are about remitting the amount due on their subscription up to the close of the present year, will please address their letters *immediately* to PHILADELPHIA, instead of New York, and *much oblige* the proprietor and editor, D. K. MINOR.

BOSTON AND PROVIDENCE RAILROAD. Passenger Notice. Summer Arrangement. On and after Monday, April 6, 1846, the Passenger Trains will run as follows:

For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m.

Accommodation Trains, leave Boston at 7½ a.m. and 4 p.m., and Providence at 8 a.m. and 4½ p.m.

Dedham trains, leave Boston at 8 a.m. 12½ m., 3½ p.m., and 6½ p.m. Leave Dedham at 7 a.m. and 9½ a.m. and 2½ and 5½ p.m.

Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7-20 a.m. and 3½ p.m.

All baggage at the risk of the owners thereof.

31 1y W. RAYMOND LEE, *Supt.*

BRANCH RAILROAD and STAGES connecting with the Boston and Providence Railroad.

Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I.—Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

BOSTON AND MAINE RAILROAD. Upper Route, Boston to Portland via, Reading, Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Winter Arrangement, 1846–7.

On and after October 5th, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows:

Boston for Portland at 7½ a.m. and 2½ p.m.

Boston for Great Falls at 7½ a.m., 2½ and 3-25 p.m.

Boston for Haverhill at 7½ and 11½ a.m., 2½, 3-25 and 5 p.m.

Boston for Reading at 7½, and 11½ a.m., 2½, 3-25 5 and 6½ p.m.

Portland for Boston at 7½ a.m., and 3 p.m.

Great Falls for Boston at 6½ and 9½ a.m., and 4½ p.m.

Haverhill for Boston at 7½, 8½, and 11 a.m. and 3 and 6½ p.m.

Reading for Boston at 7, 8½ and 9½ a.m., 12 m., 1½, 4 and 7½ p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above $50 in value, and that *personal* Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every $500 additional value.

1y31 CHAS. MINOT, *Super't.*

THE BEST RAILROAD ROUTE TO THE Lake and Buffalo, from Cincinnati.

Take Cars to Xenia, 65 miles; take Stage to Mansfield, 88 miles; thence by Cars to Sandusky, 56 miles to the Lake; thence Steamboat to Buffalo, 230 miles.

Fare from Cincinnati to Sandusky.....	$8 00
" " Sandusky to Buffalo, Cabin.....	6 00
" " " " " Steerage....	4 50

Fare by this route, although the cheapest across the state, will be reduced in a short time, railroad lengthened, and speed increased.

Leave Cincinnati in the morning, arrive at Columbus at night.

Leave Columbus in the morning, arrive at Sandusky same day.

Leave Sandusky, by Boat, in the morning, arrive at Buffalo next morning in time for the Cars north and east for Niagara Falls, Canada, Saratoga Springs, Troy, Albany, Boston, New York, Washington, or Philadelphia.

Passengers should not omit to pay their fare through from Cincinnati to Sandusky, or from Columbus to Sandusky via Mansfield; as this route is the only one that secures 56 miles [this road is run over in 9h. 50m.,] most railroad which is new, and is the shortest, cheapest and most expeditious across the state.

Fares on the New York railroads are about to be reduced. B. HIGGINS, *Supt, etc.*

Sandusky, Ohio. *M. & S. C. R. R. Co.*

SUMMER ARRANGEMENT.—NEW YORK AND ERIE RAILROAD LINE, from April 1st until further notice, will run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

FOR PASSENGERS—

Leave New York at 7 A.M. and 4 P.M.
" Middletown at 6½ A.M. and 5½ P.M.

FARE REDUCED to $1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

FOR FREIGHT—

Leave New York at 5 P.M.
" Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P.M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts. H. C. SEYMOUR, Sup't.

March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board. 13 tf

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NORWICH AND WORCESTER RAILROAD. Summer Arrangement, commencing Monday, April 6, 1846.

Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4½ p.m. Leave Worcester, at 10 a.m., and 4½ p.m.

☞ The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1½ p.m. train from Boston.

New York Train via Long Island Railroad:

Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4½ p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

☞ *Fares are Less when paid for Tickets than when paid in the Cars.* ☜

32 1y J W. STOWELL, Sup't.

TROY RAILROADS.—IMPORTANT NOtice.—Troy and Greenbush Railroad, forming a continuous track from Boston to Buffalo and Saratoga Springs.

This road is new, and laid with the heaviest iron H rail. Trains will always be run on this road connecting at Greenbush each way with the trains to and from *Boston* and intermediate places, leaving Greenbush daily at 1¼ p.m. and 6 p.m., or on arrival of the trains from Boston; leave Troy at 7¼ a. m. and 4¼ p.m., or to connect with trains to *Boston*.

Trains also run hourly on this road between Troy and Albany. Running time between Greenbush and Troy, 15 minutes.

TROY AND SCHENECTADY RAILROAD.

This road is laid its entire length with the heaviest H rail- which is not the fact with the road from Albany. Trains will always be run on this road connecting each way, to and from Buffalo and intermediate places. Leave Troy for Buffalo at 7¼ a.m. and 1 p.m. and 6¼ p.m., or to connect with the trains for the west; leave Schenectady at 2¼ a.m., 8¼ a.m., 1 p.m. and 3¼ p.m., or on arrival of the trains from Buffalo and intermediate places.

TROY AND SARATOGA RAILROAD.

THE ONLY DIRECT ROUTE.

No change of passenger, baggage or other cars on this route. Cars leave Troy for Ballston, Saratoga Springs, Lake George and White Hall at 7¼ a.m., (arriving one hour in advance of the train from Albany,) and at 3¼ p.m. Returning, leave Saratoga at 9 a.m. and 3¼ p.m., (reaching Troy in time for the evening boats to New York.) Cars also leave Troy for the Burrough at 3¼ p.m. and 7 p.m., connecting with packet boats for the north. This takes passengers from New York and Boston to Montreal in 44 hours.

N.B. Travellers will find the routes through Troy most convenient and economical, and as expeditious as any other. The steamboats to and from New York land within a few steps of the railroad office, and passengers are taken up and landed by the different railroad lines at the doors of principal hotels, thus saving all necessity for, and annoyance from, hack drivers, cabmen, runners, etc.

Aug 3, 1846. 1y 32

BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7¼ and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry — with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5¼ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours. Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5¼ P. M from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER, 17 Burling Slip.

1y10 New York.

NEW RAILROAD ROUTE FROM BUFfalo to Cincinnati.

Passengers destined for Columbus and Cincinnati, O.; Louisville, Ky., St. Louis, Mo., Memphis, Tenn., Vicksburg, Natches, New Orleans, and all intermediate ports, will find a new, and the most expeditious and comfortable Route, by taking Steamboats at Buffalo, landing at Sandusky City, Ohio, distance.....230 miles.

From thence by Cars, over the Mansfield Railroad which is new and just opened [laid with heavy Iron,] to Mansfield, distance	56	"
Thence by Stage via Columbus to Xenia over gravel and Macadamized Road, (the best in the state,) in new coaches, distance	88	"
Thence, over the Little Miami Railroad, from Xenia to Cincinnati, distance	65	"

TIME.

From Buffalo to Sandusky	24	hours.
Leave Sandusky 5 a.m. to Columbus	14	"
From Columbus to Cincinnati	15	"

Or say 30 hours from Sandusky to Cincinnati over this route, including delays.

FARE.

From Buffalo to Sandusky, Cabin	$6 00
" " " " Steerage	3 00
" Sandusky to Columbus	4 50
" " *through* to Cincinnati	8 00

Passengers should not omit to pay their fare *through* from Sandusky City to Cincinnati and take receipts availing themselves of the benefit of a contract existing between the said Railroad and Stage Co's, securing 121 miles travel by good Railroad and 88 miles by Stage, in crossing from Lake Erie to the Ohio river, in the space of 30 hours.

Passengers destined for St. Louis, or any point below on the Mississippi, will save by taking this route, from 4 to 6 days time and travel, and nearly half the expense, over the Chicago and Peoria route to the above places.

Fare by this route, although the cheapest, will in a short time be reduced, Railroad lengthened, and speed increased.

B. HIGGINS, *Sup't, etc.*
M. & S. C. R. R. Co.

Sandusky City, Ohio.

NEW YORK & HARLEM RAILROAD CO.—Winter Arrangement.

On and after Monday, November 23, 1846, the cars will run as follows:

Leave 27th street for 42d street, Deaf and Dumb Institute, Yorkville, Harlem Morrianna, and Williams' Bridge, at 7 o'clock a.m. From City Hall for above named places, 2 p.m. [freight train,] 2 30 p.m. 5 p.m. to Morrisiania only.

Leave City Hall for Harlem, Morrisiania, Fordham and Williams' Bridge, at 7 45 a.m., and 10 45 a.m.; 1 15 p.m., 2 p.m. [freight train], 2 30 p.m. and 3 45 p.m.

Leave City Hall for Hunt's Bridge, Bronx, Tuckahoe, Hart's Corners White Plains, Davis' Brook, Unionville and Pleasantville, [Pleasantville 4 miles from Sing Sing,] 7 45 and 10 45 a.m.; 1 15 p.m., 2 p.m. [freight train], and 3 45 p.m.

RETURNING.

Leave Pleasantville, at 8, 10, [freight train], and 11, a.m.; 1 30, and 4, p.m.

Leave White Plains, at 8 12, 10 30, [freight train] and 11 20 a.m.; 1 50, and 4 20, p.m.

Leave Tuckahoe, 8 35, 10 55, [freight train,] and 11 35, a.m.; 2 05, and 4 35, p.m.

Leave Williams' Bridge at 7 45, 8 50 and 11 50 a.m.; 2 20, 4, and 4 50 p.m.

Leave Morrisiania 8 and 9 05 a.m.; 12 05, 2 35, 4 20, 5 05 and 6 p.m.

Leave Yorkville, at 8 12 a.m.; 4 35 and 6 15 p.m.

SUNDAY ARRANGEMENTS.

Leave City Hall for Pleasantville and intermediate places, at 7 45 a.m.; 1 15 and 3 p.m.

Leave Pleasantville for City Hall, at 8 a.m.; 11, and 3 15 p.m.

Leave City Hall for Williams' Bridge and intermediate places, 10 45 a.m.; 2 30 p.m.

Leave Williams' Bridge for City Hall, at 8 50 and 11 50 a.m.; 1, 3 45 and 4 05 p.m. 1y49

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at	9 a.m. and 3¼	p.m.
Arrives at	9 a.m. and 6¼	p.m.
Leaves York at	5 a.m. and 3	p.m.
Arrives at	12¼ p.m. and 8	p.m.
Leaves York for Columbia at	1¼ p.m. and 8	a.m.
Leaves Columbia for York at	8 a.m. and 2	p.m.

FARE.

Fare to York	$1 50
" Wrightsville	2 00
" Columbia	2 12½

Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg	$9
Or via Lancaster by railroad	10
Through tickets to Harrisburg or Gettysburg	3

In connection with the afternoon train at 3¼ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at.....5¼ p.m.

Returning, leaves Owing's Mills at.....7 a.m.

D. C. H. BORDLEY, *Sup't.*

31 1y Ticket Office, 63 North st.

LEXINGTON AND OHIO RAILROAD. Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m. Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare $1·25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9. from Frankfort, other hours as above.

351y

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily	$26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia	22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

1y25 JOHN KING, Jr, *Agent.*

CENTRAL RAILROAD—FROM SAVANnah to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, $8 00. Freight—

On weight goods generally	50 cts. per hundred.
On measurement goods	13 cts. per cubic ft.
On brls. wet (except molasses and oil)	$1 50 per barrel.
On brls. dry (except lime)	80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery	40 cts. per hundred.
On hhds. and pipes of liquor, not over 120 gallons	$5 00 per hhd.
On molasses and oil	$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE,

y40 Gen'l. Sup't. Transportation.

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by JOHN A. ROEBLING, *Civil Engineer*, Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railrord, has now run 4 seasons, and is still in good condition. 2v19 1y

CENTRAL AND MACON AND WESTERN Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlaniic	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20	pr. 100 lbs. 35
Crockery, per cubic foot	0 15	" " 35
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price, Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days* from Baltimore.

Fare from Baltimore to Charleston	$21 00
" " " Richmond	6 60

For Tickets, or further information, apply at the *Southern Ticket Office*, adjoining the *Washington Railroad Office*, Pratt street, Baltimore, to
1y14 STOCTON & FALLS, Agents.

RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of **20** years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.
Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
1y25 Philadelphia, Pa.

GEORGIA RAILROAD: FROM AUGUSTA to ATLANTA—171 MILES. AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenaula River, in Cass Co., Georgia.

RATES OF FREIGHT.

		Between Augusta and Oothcaloga. 250 miles.	Between Charleston and Oothcaloga. 386 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot	$0 16	$0 25
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	0 90	1 40
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Bar and Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 55	0 75
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Feathers, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc	0 37½	0 62½
	Cotton, per 100 lbs.	0 45	0 65
	Molasses, per hogshead.	8 50	13 50
	" " barrel	2 00	3 25
	Salt per bushel	0 17	
	Salt per Liverpool sack.		95
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows	0 75	1 37

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,
Ch. Eng. and Gen. Agent.
Augusta, Sept. 2d, 1846. *44 1y

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846. 1y1

TO RAILROAD COMPANIES AND MANUfacturers of railroad-Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside. THOMAS & EDMUND GEORGE,
a45 E. cor. 12th and Market sts., Philad., Pa.

LITTLE MIAMI RAILROAD.—OPEN TO SPRINGFIELD—Distance 84 miles—connecting at Xinia and Springfield with Messrs. Neil, Moore, & Co's. daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City. via Urbana, Bellefontaine, Kenton, and the Mad river and lake Erie railroad, or Columdus, Delaware, and the Mansfield and Sundusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as fllows:

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 35 minutes A. M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

FARE—From Cincinnati to Lebanon	$1 00		
" " " Xenia	1 50		
" " " Springfield	2 00		
" " " Columbus	4 00		
" " " Sundusky city	8 00		

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company, on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

The 1½ P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th instant.

A freight train will run daily.
47tf W. H. CLEMENT, *Sup't.*

LAWRENCE'S ROSENDALE HYDRAULIC Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,
142 Front street, New York.

☞ Orders for the above will be received and promptly attended to at this office. 32 1y

CLEVELAND, COLUMBUS AND CINCINNATI Railroad. In pursuance of a resolution adopted by the Board of Directors, on the 21st October, notice is hereby given, that proposals will be received up to the 1st day of December next, for the Grading, Timbering, Bridges and Culverts on forty miles of the road, commencing at Cleveland. Profiles, Specifications, Terms of Payment, and all other information pertaining to the matter, to be furnished on application at the office of the Company, Merwin Block, Cleveland.

JOHN W. ALLEN, President.
A. G. LAWRENCE, Secretary.
CYRUS WILLIAMS, Engineer.
Cleveland, October 23, 1846. 45*1m

BACK VOLUMES OF THE RAILROAD JOURNAL for sale at the office, No. 23 Chambers street

A. & G. RALSTON & CO., NO. 4 South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz:
180 tons 2½ x ½ inch Flat Punched Rails, 20 ft. long.
25 " 2½ x ½ " Flange Iron Rails.
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GEORGE VAIL & CO., SPEEDWELL IRON Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1¼ in. to 2½ in thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wro't. Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wro't. Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions. 1y1

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 fe. with lathes, work benches,

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side o Parker st., containiug 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja45

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

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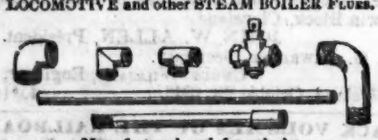
From 4 inches to ⅛ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER Flues.



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RAILROAD IRON.—THE NEW JERSEY Iron Company, Boonton, N. J., are now preparing to make Railroad Bars, and are ready to take orders or make contracts for Rails, deliverable after the first of December next. Apply to

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September 18, 1846. 10t39

NORRIS' LOCOMOTIVE WORKS.

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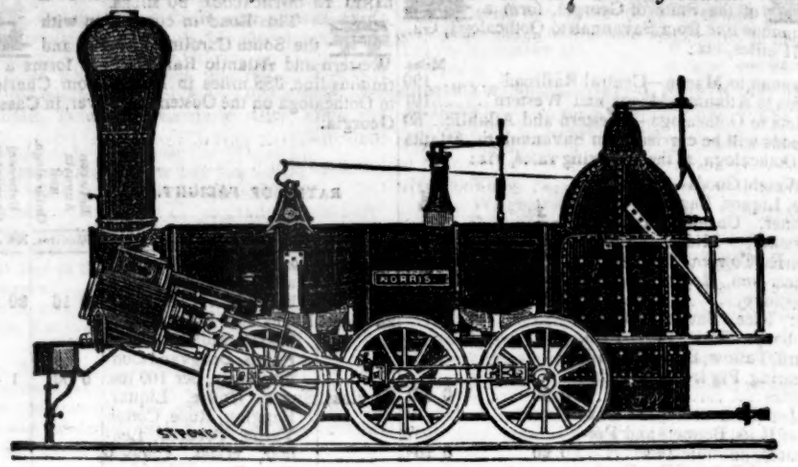

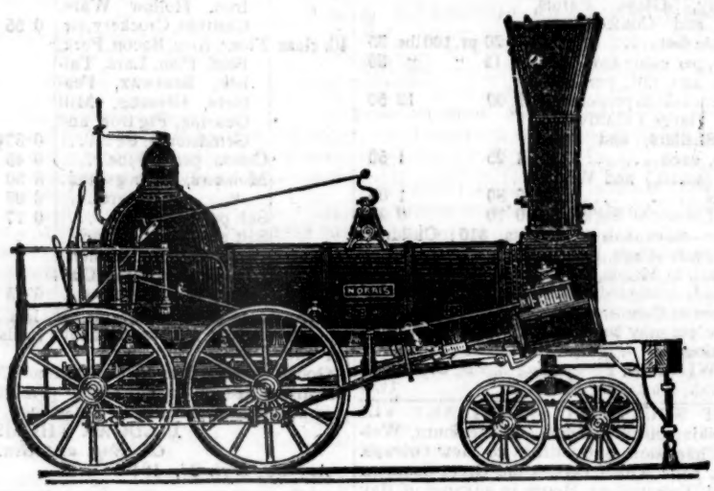

MANUFACTURE their Patent 6Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15	inches	Diameter	of	Cylinder,	× 20	inches Stroke.
"	2,	14	"	"	"	× 24	"	"
"	3,	14½	"	"	"	× 20	"	"
"	4,	12½	"	"	"	× 20	"	"
"	5,	11½	"	"	"	× 20	"	"
"	6,	10½	"	"	"	× 18	"	"

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

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THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

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25,000 to 30,000 made weekly. 35

GUN-COTTON FOR MINING PURPOSES.—This new discovery has given rise to much remark and speculation. The following article in relation to its application to mining purposes is from the London Mining Journal of October 31st; we give it for the benefit of our readers who are engaged in mining operations.

In the *Mining Journal* of last week, says the editor, we inserted a letter from a correspondent, signing himself "Tamper," on this interesting subject, in which he endeavored to show that it can never be used economically in blasting, it being (even allowing it double strength) twice the cost of gunpowder. As Mr. R. Taylor, in the account given by him before the annual meeting of the Royal Geological Society of Cornwall, of his experiments in various mines, gives such different results, we shall, in giving that statement, just compare notes, and it will be seen that, not only is the cotton as economical in use, although three or four times the price of powder—as *one-fourth* (and not *one-half*, as stated by "Tamper,") by weight of the powder used, is sufficient—but it is free from all pernicious consequences afterwards; and instead of the men not being able to return to their work after a blast for an hour, as is the case with gunpowder, they can enter immediately after the cotton has exploded—thus the air of the levels is never deteriorated, and an amazing amount of time and labour saved in the aggregate. Another advantage of the explosive cotton is, that it is never injured by water, and has lain six months in it, and, when dry, recovers its explosive properties; it can thus be kept in tanks for security, and without any danger of accidental explosion. Another error, which our correspondent appears to have made, is in its compressibility, stating "that 4 ozs. of powder occupies 8 cubic inches, and that 2 ozs. of cotton *considerably compressed*, occupy 27 inches." Now, Mr. Taylor states that he could compress the cotton into a *much smaller space than gunpowder;* and thus leave more room for tamping; and, as to spontaneous combustion at 30°, there appears no danger of the kind. We will, however, allow Mr. Taylor to speak for himself; he says:—"The first experiment was made in a granite quarry near Penryn, at Spargo; and he and Professor Schonbein were accompanied on that occasion by Messrs. R. W. Fox, C. Fox, B. Fox, Mr. Hoskin (the owner of the quarry,) and several other gentlemen. The surprise and incredulity of the workmen were very great, and highly amusing. When he charged a hole with some of the cotton, they thought he was doing a very absurd thing, and one of the men offered to sit on the hole for a pint of beer: but he advised him to see the result of the first explosion, before he tried that experiment. They then had two holes prepared; the quarrymen weighed out the quantity of powder required to charge their hole, and he weighed out one-quarter of that weight of the cotton. Their charge (said Mr. Taylor) was fired, and produced its effect completely; our charge was fired, and, to their great amazement, tore the rock to fragments—in fact, doing more than was required, the charge being too great.—They had next two strong holes bored in a very compact part of the rock. It required 13½ ozs. of powder, and we charged the corresponding hole with 3 ozs. of the cotton; their charge was fired first, and did its work well—and the cotton being fired, did its work well also, the men saying that it could not have been done better. In another experiment, with a smaller quantity, he found that one-sixth part of the cotton did its work; but he did not place much reliance upon that result, as possibly the men might have overrated their charge. They tried some other experiments with the use of sand and wedges, and he might say that the whole of the experiments were uniformly successful when the charge of cotton was equal to one-fourth the requisite weight of powder. So far the strength of the cotton was demonstrated, but he was then anxious to make experiments in regard to its effect on the air of the mine; and the iron mine of Restormel was selected, on account of its being easy of access, so that the professor might accompany him without fatigue. From its being on hard ground, and having the adit level driven a considerable distance into the hill, the end of that level was very close, and presented great difficulty in the escape of the smoke of gunpowder.—They first tried an experiment in the extreme end of the adit level, six or seven hundred fathoms from the entrance. The miners prepared two holes, but they did not use gun powder on this occasion, as it would have interfered with their experiments. They asked the men to produce the quantity of powder required for those holes, and then weighed first one-quarter and then one-sixth part of the weight of cotton; they fired the two holes, which tore their ground, and the miners said it was quite satisfactory. They told him that, if powder had been used, they could not have gone into the place for three-quarters of an hour; but (said Mr. Taylor) we went in instantly, the two captains, Professor Schonbein, and myself. We experienced no inconvenience whatever, except from the safety fuse, and that was no inconvenience to the men. One quality of the cotton was of great importance to miners; it was not so easily affected by the damp as powder. It was not permanently injured by being wetted, but might be washed and dried, and its explosive power be the same as before: it had been kept in water six months without injury. It might be kept in magazines and tanks in perfect security; and it was an important fact, that there was no danger in the progress of its manufacture—for, until the process was completed, it was not explosive in any way; and no part of the process involved any danger. He had no sort of knowledge of what the composition was, except that it was a wool basis. With regard to expense, he was assured that a given quantity of power could be obtained probably for less; but weight for weight it would be more expensive than gun powder." [A candle was then lighted, and Mr. Taylor, producing a small quantity of the cotton, held it over the flame. It instantly exploded; and being No. 2 of the cotton, produced a slight smoke. Mr. Taylor then procured a sheet of clean white paper, on which he exploded a small quantity of the cotton, which left some brown powdery particles.—This, he said, would not be the case with the No. 1 cotton, which was intended to be used in fowling pieces and rifles. The president, who was close to Mr. Taylor, said he did not perceive any smell from the explosion.]—We thus see that Mr. Taylor's experiments, and "Tamper's," produce widely different results; the former proving that it can be used most economically, the other that it cannot: future experiments will show which is right. With such a detail, however, given before a scientific body, of experiments made by several scientific men, our opinion is certainly in favor of Mr. Taylor's statement. We have here given "Tamper" "a clear stage, and no favor,"—but we cannot help asking, is he interested in the success of gunpowder?

RELATIVE DISTANCES BY RAIL AND COACH ROADS.

We copy the following article, on this subject, from a late Railway Journal, to show that the difference is not so great between these two modes of travelling, as has been supposed.

The outcry raised relative to the assumed circuitousness of railways over coach roads, says the Railway Chronicle, will be best answered by a statement of the actual facts. In some cases the balance is actually in favor of the rail, and in other instances rail and road are both so much upon a par as to render the disparity almost unappreciable. It is a remarkable fact, that the greatest disparity occurs on those lines where, from the early bigotry and objection entertained against railways, the companies were compelled to take a circuit, as was the case with the London and Birmingham at Northampton, and the South Eastern in Kent. The fault, in these exceptional cases, therefore, does not rest with the originators of the railways, but with Parliament and the public; and the companies, with a laudable forgetfulness of former opposition, are now actively remodelling their lines, making them more conformable with a direct course. Connected with the question of relative distances, should be borne in mind the increased speed, and consequently the diminution of time. While by the old coaches the distance between London and Birmingham took ten hours, it now takes only four and three. While, from London to Bristol, in former times it took sixteen, it is now accomplished in four and two and a half. A coach from London to Southampton was usually ten hours on the road—a train is only three. Commencing with the principal stations and places on the *Great Western* and the old western road:—

Station or place.	Rail.	Road.
Slough	18	21
Maidenhead	22½	26
Reading	35½	39
Oxford	63	55
Swindon	77	81
Cirencester	95	88
Stroud	101½	102
Gloucester	114	107
Chippenham	93½	93
Bath	106½	106
Bristol	118½	118
Bridgewater	151½	137
Taunton	163	144
Exeter	193½	176

Oxford, it will be seen, is about 8 miles further by rail than by road. Bath on the other hand is nearly *identical* in both instances.—To Bristol there is *only a quarter of a mile difference* in favor of the road. Beyond this the circuit is more perceptible, *via* the Bristol and Exeter, which places Bridgewater 14¼ miles, Taunton 19, Wellington 21, and Exeter 17¾ miles further from London than by the old road. A "direct" line to Exeter is the proposed remedy for this. On the *London and North Western*, the distances by road and rail are nearly parallel, at least as regards the main line; but upon the branches there is considerable difference:—

Station or place.	Rail.	Road.
Watford	17¼	15
Tring	31¼	31
Aylesbury	43¼	40
Rugby	83	83
Coventry	94	91
Birmingham	112¼	109
Walsall	122	118
Wolverhampton	130	127
Stafford	141¼	136
Liverpool	210¼	205
Chester	187¼	181
Lancaster	238¼	240
Manchester	197¼	186
Northampton	67¼	66
Higham Ferrers	83	65
Thrapstone	89	74
Oundle	97¼	77
Peterborough	110	79

To Liverpool there is an increased distance by rail of only 5¼ miles. From London to Lancaster there is an actual saving of 1¼ mile, the distance being by road 240, by rail 238¾. To Manchester the distance is increased by only 11 miles. The *Trent Valley* will diminish this. By the *Northampton and Peterborough*, Northampton is made 1¼ mile further by rail than road, the respective distances being 66 and 67¼. Towards Peterborough a greater disparity appears.—To Higham Ferrers there is a difference of 18 miles in favor of the road. To Thrapstone 15, Oundle 20¼, and Peterborough 31¼. The *London and York and Eastern Counties* will reduce this distance. The *Midland* comes next in the table of co-relative distances:—

Station or Place.	Rail.	Road.
Derby	132¼	126
Loughborough	115	109
Leicester	103	97
Nottingham	130¼	124
Sheffield	177¼	163
Leeds	205	191
York	219¼	198

The *London and York* will reduce the distance to Sheffield, York and Leeds, to about the old coach standard. By the *Bristol and Birmingham*, the old road is enlarged upon rather than diminished:—

Station or place.	Rail.	Road.
Bromsgrove	127	116
Droitwich	132¼	118
Worcester	142¼	111
Tewkesbury	153¼	103

New lines will neutralize these differences. On the *South Western*, the disparities are of no moment, except in the case of Gosport:

Station or place.	Rail.	Road.
Guildford	28	29
Basingstoke	46	45
Southampton	78	75
Gosport	88	78

The increase by the *South Eastern* over the road is, perhaps, more apparent than by any other route:

Station or place.	Rail.	Road.
Maidstone	56	34¼
Ashford	67	54
Canterbury	82	55
Ramsgate	97¼	72
Folkestone	82	71
Dover	88	72
Tunbridge	41	30
Tunbridge Wells	46	36

Acts for alteration and improvement, obtained by the South Eastern last session, will shorten these distances. On the *Eastern Counties* (Colchester line) there is *scarcely any difference* worthy of note to the principal points of approach. On the Cambridge line, however, this does not occur:—

Station or place.	rail.	road.
Cambridge	57¼	51
Brandon	88¼	78
Thetford	95¼	80
Norwich	126	108
Yarmouth	146	123

By the *Brighton and South Coast* there has been a diminution of distance between Brighton and London:—

Station or place.	rail.	road.
Brighton	50¼	54
Chichester	79	62
Hastings	83	64¼
Worthing	61	56

Brighton is placed 3½ miles nearer to London by rail than it was by road; but, beyond Brighton, this saving is sacrificed by the circuitousness of its offshoots to Hastings, Chichester and Worthing. The new South Eastern line to Hastings will make the distance almost co-equal with that of the old coach-road.

LONG LINES OF RAILROADS.

Their Advantages and Disadvantages.

The propriety of railroad amalgamations, or of uniting different lines under one management, is discussed at considerable length in a late number of Herapath's Journal, in which the editor takes decided ground against the measure; and we think there is force in his reasons, though his conclusions are opposite to the opinions often expressed in this Journal, and we therefore give the article referred to at length. Will some of our readers, experienced in such matters, give us their views on the subject?

The subject is introduced under the head of "*Duties of the New Railway Board*," and the editor says:

Next to the accounts, if not before them, may fairly be placed that system of uniting and combining railway interests which has of late been so fashionable. The plea held out by some companies is, economy of management, which furnishes the opportunity of lower fares and convenience to the public.—These are magic words, and tell wonderfully with Parliament. "Give us an act to lease or amalgamate," as the case may be, say the companies, "and we shall be able to work immensely cheaper, and, of course, to lower our fares. Besides there will be but one company all the way, and, of course, no change of carriages, and a vast increase of comfort to the public." No doubt is entertained of this, and the good natured legislature, mindful of the public good, concedes the lease or amalgamation. Now all this is mere moonshine. Practically there is no economy in the amalgamation of lines of considerable length; neither is there any additional convenience to the public; but there is a great amount of mischief to its interests, both present and eventual.

Beyond a certain length, a line cannot be well and vigorously managed by an executive at one end; and two executives never have, and it is not in the nature of man that they ever should, act for long well together. That has been proved in the London and Birmingham, and in the Great Western. Both have tried the experiment of two executives, and both have condemned and abandoned them.

What the length is that can be best managed, depends on the nature of the line and the character and amount of business done. As far as our observations have gone, about 100 to 120 miles are ample for any one company to have under strict surveillance, and to manage well. With a greater length the vigor seems to diminish. There is a feebleness, a laxity, and a slovenliness inimical to economy and dangerous to the public. Unlike trees, whose vegetation is stronger the further from the root,—the vigor of action is diminished by the distance it has to be sent through. As a compact, well-managed business is best for the trade, so a compact railway is best for the public and for the company, provided it be of sufficient extent to call forth their whole energies, and not too large to overpower them. We pitch upon 100 miles, because it is found, in practice, that about fifty miles out and fifty miles home is the best distance for an engine; but a score or so of miles in the length of a line is not material.

With a line of a hundred miles, therefore, and the locomotive depot in the middle, the line may be easily worked. But if there is a length of 200 miles or more, there must be two central depots, one of which cannot be very closely under the control of the executive. Directors can rarely spare time to run 150 miles out and so many back, like they can 50, and the consequence is, less supervision in the executive, and more carelessness in the agents; for the trite old proverb, that

"While the cat's away,
The mice will play"—

seems to hold as truly in railway as it does in other matters.

Beyond 100 miles, therefore, in one length there is no economy, except in the small fractional expense of management, and that is more than made up by the diminished vigor of action. What, then, can a company save by a greater length? Practically nothing.

There are exceptions as to more than 100 miles being able to be well managed. For example, when two, three, or more lines radiate from one centre, in which is placed the head quarters of the Board. Such a case is at Derby, with the North Midland, the Midland Counties, and the Derby Junction lines. That, however, forms a different feature in the railway phiz. We speak of single continuous lengths.

Then, as to convenience for the public. It is a mere figment of the imagination to say, that companies uniting grant any additional

convenience to the public. If it is, it must consist in one or both of two things—namely, the avoidance of delays at the terminal stations, and the change of carriages. Now, the change of carriages has long since been done away with by the clearing house system, by which a person goes from London up to Newcastle, and will shortly to Edinburgh, without any change of carriage.—Amalgamations, therefore, are not necessary to cure that evil, for it has been cured without the slightest reference to them. And with regard to delays at the stations, the interest of the company is sufficient to prevent that. But if it was not, a controlling power in the new board would soon extinguish any unaccommodating disposition on the part of a company. Let them have a hint that they may appear before Parliament again, or that a short bill may pass, vesting some stringent powers in the hands of the board, and they will not long continue refractory.

Economy, therefore, and lower fares, and more comfort to the public, are mere baits for the weak, and have no existence in fact.

"Well, if there be no advantage in large amalgamations." it may be asked, "what is the advantage of the companies continuing separate?" We will name some, by no means pretending to enumerate all.

If a line of 200 miles, say, is in two companies' hands, there is a constant spirit of rivalry pervading both masters and men. At the half-yearly meetings each board is anxious to produce a better report than his neighbors. It is desirous to show a better balance sheet, larger profits, less expenses, greater freedom from accident, and a more efficient and clever management. This is necessary to gain favor in the eyes of the proprietary; and however much it is attempted to be concealed, it is the great object of all boards to appear at the head of the fraternity.

To effect this, the masters fall back on the men. Every artifice which can, is called into requisition to insure economy with all that the public is desirous of—namely, comfort, security, punctuality, and speed. The men, therefore, of the two companies, instead of jogging on in the old way, are set in rivalry with each other. Their brains are racked, and improvement and invention are the results. The companies benefit immediately, and the public soon after. What finer illustration of this can be found than in the father of railways—the Liverpool and Manchester? While that railway stood alone, they blundered on with their old leaky extravagant engines, and no one thought of improvement. Consuming only from fifty to sixty pounds of coke a mile, and paying 9 and 10 per cent., they looked upon themselves as models of perfection. When, however, the North Union, Grand Junction, and London and Birmingham came to be opened, and a collision of intellect took place, new light was struck out, and their old leaky, shaky engines were superseded by new and improved ones. Their 50 odd lbs. of coke sank to 35, 25, and eventually to 17 or 18 lbs. a mile. Can any one imagine this would have happened if no new lines had been opened, or, if the new lines had been all under one company? Certainly not. The experience of many previous years leaves no doubt upon this. It was the effect of new interests and partly competing companies, which kindled the spirit of enterprise in father Liverpool and Manchester.

If all the companies in England were under one management, they would all progress as the Liverpool and Manchester did, that is, by paying their 10 or 8 per cent., and leaving improvement to take care of itself.

We call, therefore, on the new board to oppose further amalgamations or leasings as a general rule. We do not mean to say there are not cases still to come, in which it would be desirable, but already has amalgamation, as a rule of legislation, been carried to too great an extent. It is not for the public good, nor for the interest of railways, that it should be further extended. Let us have their capital accounts closed—the enormous debts of some of them paid off, and see how they stand then, before further risks are encountered.

This is most especially wanting with the Great Western. Not greater inroads has the sea made on the South Devon Railway, than will the wild system that company are pursuing make on their permanent welfare.—The sooner it is checked and terminated the better. Several of the lines which the Great Western have taken up are considered positive abortions. Close the capital account, and stop further enterprises, and the truth of what we say will soon be seen. Other companies have done deeds equally wild, but none stand out in such extensively bold relief as the Great Western, and it is for that reason we dwell on them.

From the Mining Journal.

DR. PLAYFAIR AND PROFESSOR BUNSEL'S EXPERIMENTS.

Sir: These experiments, alluded to in your last number, are partly confirmed and partly disproved, by my own experience, in the following details: Darkhill furnace, using coke only, consumed every 20 minutes, as an average, materials, whose composition tolerably well ascertained by separate analysis, gave, for the whole quantity consumed in that space of time, the following proportions: iron, 200; calcium, 74; aluminium, 31; silicon, 89; carbon, 324; oxigen 302 = 1020 lbs. These passed in through the tuyeres in the same space of time, of oxigen, 1361: nitrogen, 4765 = 6126 lbs. From 285 lbs. of peroxide of iron were produced 200 lbs. of perfectly corbonated iron. Now 1 lb. of carbon will produce from the peroxide 3·5 lbs. of carbonated iron—therefore, in the deoxidation of the above, 285 lbs. of peroxide, and in the subsequent carbonization of the iron 57 14 lbs. of carbon were consumed. But the whole amount of carbon consumed amounted to 324 lbs., of which only 57·14 lbs. was required for deoxidating the ore, and carbonizing the iron: showing waste in carbon, 266 86 lbs. This gives, then, at Darkhill, of effective carbon, 17 91; and of wasted carbon, 82·09 per cent. At Alfreton, the results were, of effective carbon, 18·46; and of wasted carbon, 31 ·54 per cent.; and this result very nearly coincides with that at Darkhill. That the whole of the oxygen is consumed at the tuyeres is, however, a most erroneous and falacious conclusion; for, from the preceding data, it appears that 1361 lbs. of oxigen passed into the regions of the tuyeres during 20 minutes; while only 266·86 lbs. of superfluous carbon remained to unite with its equivalent weight of oxigen, 347 80 lbs. to form carbonic oxide: leaving 1013 lbs. of free oxygen, which must pass upwards. Now, if the whole of this carbonic oxide should pass into carbonic acid, this would reduce the quantity of free oxygen to 666 lbs.; and deducting some part of this amount for leakage at the tuyeres, and from the front of the furnace, there must still pass off at the furnace top from 500 to 600 lbs. of oxygen every 20 minutes, free and uncombined with carbon. Therefore, only a *part* of the oxygen is burned in the vicinity of the tuyeres.

Next, only a portion of the waste carbon can unite with the oxygen—for a large portion of the nitrogen unites with carbon, to form cyanogen, or bicarburet of nitrogen; and this is made manifest by the immense quantity of purple flame thrown out from the region of the tuyeres, whenever the tuyere stoppings give way—and this consumption of carbon must leave a larger amount of free oxygen to pass off, than that which I have above estimated. A portion of the carbon is likewise consumed in deoxidating the protoxide of calcium, and the sesquioxide of aluminium, especially in hot-blast furnaces; and the truth of this is made evident by pulverizing a portion of the fresh slag (which is an alloy of these metals in a partially revived state, combined with silicic acid,) and throwing the powder into water, when hydrogen gas will be copiously disengaged, in consequence of the metallic bases of calcium and aluminium reabsorbing their respective complements of oxygen, at the expense of the water. There is reason to believe, however, that only the sesquioxide of aluminium suffers deoxidation, and is converted into a protoxide; and I have found that when protoxide of calcium and sesquioxide of aluminium are pulverised, and intimately intermixed, and afterwards exposed to an intense and long continued heat, the air being excluded, the protoxide of calcium absorbes oxygen from the sesquioxide of aluminium, and is converted into peroxide of calcium; whilst the sesquioxide of aluminium yields a portion of its oxygen, and is converted into protoxide of aluminium. When the compound thus obtained in a vitrified mass, of a pale greenish color, is again pulverised and mixed with water, the metallic oxides gradually react upon each other; whilst the protoxide of calcium, as it reforms, absorbs carbonic acid from the atmosphere; and in a few hours the mass acquires considerable hardness, and at length passes into a species of zeolite, of intense hardness, provided that the proportions of alumina and lime have been at first skillfully adjusted. Since the reaction of the oxides on each other is facilitated thro' the medium of water, the mass described sets and hardens as well under water as in the air, provided that the water contains, as is gene-

rally the case, some carbonic acid. By this process a cement may be prepared of the most beautiful color, and possessing a degree of hardness and tenacity hitherto unattained in the manufacture of cements; silica must be added, either at first, combined with the alumina, or subsequently, when the vetrified mass is pulverised; and, to insure a maximum degree of hardness to the cement, the silica, alumina, and lime, must be mixed in certain definite proportions.

ROBERT MUSHET.

Coleford, Oct. 20.

HEAVY WORK.

Orleans and Vierzon Railway.—The Prefect of the department of the Loiret states in his report, that the length of line p ssing through that district is 41,260 metres, occupying 43 hectares of land which cost 610,182 francs, or at the rate of 14,105 francs per hectare. Cost of embankments, 906,745 francs; masonry, bridges, etc., 1,936,584 francs; stations, 45,632 francs; sundry expenses, 171,105 francs; total, 3,090,066 francs. All the masonry has been completed, except that of the viaduct, which is to be erected over the Loire.

RAILWAY TRAFFIC IN FRANCE.

In France, as elsewhere, there is a regular increase in railway traffic. The *Journal des Chemins de Fer* gives the following comparison of traffic returns on these lines during the three months of July, August, and September:

Paris and Orleans Railway.

	1843.	1844.	1845.	1846.
	fr.	fr.	fr.	fr.
July,	496,783	586,832	678,122	806,914
August,	569,765	611,382	739,036	904,190
September,	635,020	652,398	769,958	934,400
	Fr.1,701,561	1,850,612	2,187,116	2,615,504

Paris and Rouen Railway.

	1843.	1844.	1845.	1846.
	fr.	fr.	fr.	fr.
July,	398,772	634,832	700,450	747,341
August,	512,548	709,089	811,173	886,283
September,	608,001	739,740	839,761	897,110
	Fr.1,549,321	2,083,661	2,351,384	2,530,734

The aggregate total increase of traffic on the two lines in three years amounts to 60 per cent. The increase over the preceding year on the Orleans Railway, in 1841, was 9 per cent.; 1845, 18 per cent.; and in 1846, 21 per cent. On the Rouen, in 1844, the increase over the preceding year was 34 per cent.; 1845, 13 per cent; and in 1816, 7 per cent.

RAILWAYS IN ROME.

We learn from the same journal that the Pope has conceded two lines, viz., from Rome to Boulogne, and from Rome to Civita-Vecchia, to an Anglo-Italian Company. The capital is to be 75,000,000 francs. The Jackson Company are to subscribe six-ninths; the Torlonia Company, two-ninths; and the Bank of Rome, one-ninth of the capital; and that it is considered to be an event of great importance.

EVASION OF FARE, it would seem, is no child's-play in England, as the following reports show:

"*Evasion of Fare.*—James Sheriff has been committed to the house of Correction at Aylesbury, for seven days, for having travelled in a carriage on the London and North Western without having paid his fare."

"*Refusal to Pay the Fare.*—Oct. 22.—A petty session was held at Watford, to adjudicate on a charge, made by the London and North Western against Mr. E. C. Milne, a solicitor, of Manchester, for an alleged attempt to defraud the said company of the proper fare to which they were entitled. Mr. Barker, the superintendent of the company, stated that he applied for a conviction under the act 8 Vict. c. 20, s. 103, commonly called the railway companies consolidation act. The 103d section is as follows: 'If any person travel or attempt to travel in any carriage of this or any other company, on any railway, without having previously paid his fare, and with intent to avoid payment thereof; or if any person, having paid his fare for a certain distance, knowingly and wilfully proceed in any such carriage beyond such distance, without previously paying the additional fare for such additional distance, with intent to avoid payment thereof; or if any person knowingly and wilfully refuse, or neglect, on arriving at the point to which he has paid his fare, to quit such carriage, every such person shall, for every such offence, forfeit to the company a sum not exceeding 40s.' It appeared from the evidence of the station master at Watford, and other witnesses, that on the 30th of September last, the defendant arrived at the Watford station by the train from Manchester, accompanied by his lady and a child. Having no ticket for his child, which he admitted to be upwards of four years of age, the half fare was demanded, the payment of which, however, was refused, and accordingly his address was taken, and a summons subsequently obtained against him. The bench convicted the defendant in the full penalty and costs, under the provisions of the clause above quoted. Intimation was given that an appeal would be made on the part of Milne against the decision."

Little Miami Road.

The continued and increasing success of this road is the subject for repeated comment, we observe, in the western papers. A late number of the Cincinnati News says:

"The prosperity of this improvement must be a matter of great pleasure to the public spirited citizens who, at an early day after it was projected, favored its construction, and as well to those who have since stood by it, fast friends, and urged its completion at the earliest time possible. Completed it now is, and equipped it was supposed to be; yet hardly three months have passed by since a locomotive for the first time passed over its entire length, and already it has more business than it can do! We understand that at Springfield there are upwards of 2000 barrels of flour destined for this market, 'awaiting their time;' that at Xenia there are about 40,000 bushels of wheat in the same predicament; and that at Tod's Fork quite a large quantity of produce has accumulated, which has to lie over!

"Fertile as the Little Miami valley was known to be, its great productiveness seems not to have been fully calculated upon. And sanguine as were the friends of this improvement, that its completion would vindicate the wisdom of those who projected it, the whole truth which made it a *necessity* seems not to have dawned upon them.

"It is greatly to be regretted that the transit power of the road is lessened just now by the failure of one of its engines, which gave out on Monday last. But there is an activity and energy in the management of its affairs which we doubt not will supply all deficiencies that can be supplied now, in the shortest time possible.

"Shippers must be patient; and instead of complaining against the railroad company, because their equipments of the road are not sufficient to do all its work, congratulate themselves and thank Providence that they have a climate so salubrious, and a soil so bountiful, as to set at naught the calculations of experienced and sagacious men."

A Smash.—The Hollidaysburg Register contains an account of a frightful accident and a miraculous escape, which occurred on "plane 10" of the Portage road. On Friday last a section boat was crossing the mountain on trucks, and being under headway on the descending grade, it was discovered that the breaks of the trucks were out of order and entirely useless. Those on board now saw that a run to Hollidaysburg at a fearful speed and a smash at the end of the journey, were inevitable. Two or three leaped off, at imminent risk: but the captain, his wife, and a boy, remained aboard. Onward sped the boat, with increasing velocity, until opposite the United States Hotel in the borough, she struck a train of six cars standing on the track—the first was instantly dashed to atoms leaving not a wreck behind, and the other five were staved and destroyed. The boat was also injured considerably, but remained on the trucks; and strange to say, those on board escaped without injury!

India Rubber Tent.—A newly invented tent, made of India rubber cloth, and consequently water proof, capable of accommodating from 30 to 40 persons, is now being exhibited at the yard of the war department, Washington. Capt. S. Thistle is the inventor, and he deserves great credit for applying his genius so usefully.

(Official) Reading Railroad.

A comparative statement of the business on the Philadelphia and Reading railroad for the week ending—

	Nov. 16, 1844.	Nov. 15, 1845.	Nov. 14, 1846.
Travel	$1,643 61	$1,995 35	$2,459 40
Freight on goods.	866 43	1,299 95	2,685 67
Do. do. coal.	12,907 77	27,045 86	47,249 34
	$15,417 81	$31,123 35	$48,948 99
Coal trans., tons.	11,565	22,028	30,478

A comparative statement of the business on the Philadelphia and Reading railroad for the week ending—

	Nov. 23, 1844.	Nov. 22, 1845.	Nov. 21, 1846.
Travel	$1,578 59	$2,119 37	$2,608 20
Freight on goods.	860 22	1,275 78	2,453 87
" coal.	11,333 86	29,062 71	38,436 13
	$13,772 67	32,457 86	43,498 20
Coal trans.—tons.	10,038	23,307	26,970

A comparative statement of the business on the Philadelphia and Reading railroad for the week ending—

	Nov. 30, 1844.	Nov. 29, 1845.	Nov. 28, 1846.
Travel	$1,573 60	$1,807 14	$2,294 03
Freight on goods.	1,045 10	1,382 99	2,077 14
" coal.	7,976 87	22,932 87	39,200 77
	$18,129 34	$26,123 00	$43,571 94
Coal trans.—tons.	7,003	18,349	21,296

Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

PRINCIPAL CONTENTS.

AMERICAN RAILROAD JOURNAL.

Published by D. K. MINOR, 105 Chestnut St., Philadelphia.

Saturday, December 5, 1846.

OUR NEW LOCATION.

Agreeably with the notice given to our readers and exchanges, for the past week or two, we have now established the office and printing rooms of the *Railroad Journal* in PHILADELPHIA. Our brethern of the press will please bear this in mind, and hereafter forward their exchanges to "Railroad Journal, *Philadelphia*," instead of New York, as formerly.—All communications intended for the Journal should also be directed to D. K. Minor, FRANKLIN HOUSE, *Philadelphia*, where we shall at all times be happy to meet our RAILROAD, *editorial*, and *other* friends, and the travelling public generally.

D. K. MINOR, PROPRIETOR.

Philadelphia, Dec. 1.

☞ We have to ask the indulgence of our subscribers for the delay—or irregularity—of the numbers of the Journal, in consequence of its *removal* from New York to Philadelphia. We hope to get our new office regulated in a few days, and then to meet them regularly at the appointed time each week.

CHAMPLAIN AND CONNECTICUT RIVER Railroad.—Notice to Contractors.—Proposals will be received until the 1st day of January, 1847, for the Grading, Masonry and Bridging of that part of the line of the *Champlain and Connecticut River Railroad*, extending from its termination at Bellows Falls, up to, and including, the Summit at Mount Holly, a distance of about 34 miles—and also from its termination at Burlington to the Village of Brandon, a distance of about 50 miles.

Maps, Profiles and Specifications of the respective divisions will be found after the 15th of December, in the office of the company at Burlington, and at the office of Hon. William Henry, Bellows Falls, where every necessary information will be given.

The line will be divided into sections of convenient length for construction, and from those to whom the lettings may be awarded, satisfactory security will be required. By order of the Board,

T. FOLLETT, President.

Office of the Champlain and Conn. R. R.R.Co. }
5t49 Burlington, November 21, 1846. }

Loss of the Steamer Atlantic.

Before this number reaches the readers of the Journal, the particulars of the painful *finale* of the splendid new Sound boat, the "ATLANTIC," will have been generally known over the country. We have no disposition to repeat the dreadful details of this unhappy accident, the particulars of which must already have been so widely circulated; but we have a few remarks to offer, in connection with this affair, which we deem appropriate—and without any inclination to reflect upon what is past, we propose to consider what may be advantageous for the future.

In summing up the loss of life which attended this catastrophe, it has been ascertained that about *forty persons* were lost, the bodies of whom have been found. The latest account says that there are yet five persons unaccounted for, the number being compared with the passenger list.

The Hon. Daniel Webster had a narrow escape. It was his attention to go to New York in the ill-fated vessel, but was induced to remain a day, in consequence of the unfavorable appearance of the weather.

The Dr. Hassler mentioned as one of those lost, is C. A. Hassler, Surgeon U. S. Navy. He had just returned from the Gulf, and was on his way to Brunswick, N. J.

Information has been received that Lieut. Allan H. Morton, of the 4th Infantry, U. S. Army, is among those that perished.

Both of these gentlemen were buried at New London, Connecticut.

In the midst of the awful scene which occurred on the night the "Atlantic" was lost, the exertions of two or three individuals present, to aid their suffering fellow-beings in peril, demands more than a mere passing notice. CAPT. DUSTAN, (who was unfortunately among the lost,) prior to leaving the noble boat he commanded, is said to have exhibited a presence of mind which did him infinite credit; and not until the last hope had departed, did he forsake the splendid structure of which he was so deservedly proud. MR. GOULD, the conductor of Adams & Co.'s Express, is also mentioned as having rendered material aid in getting many of the passengers off the wreck, and not until he was completely exhausted, from standing in the surf upon that terribly cold night, did he quit the spot from which he rendered the most valuable aid to those who were exposed to the most imminent peril. MR. MUNROE, of the Norwich and Worcester Line, was also very active and useful during the awful scene of the wreck—and we allude to these gentlemen more particularly, as all accounts give them credit for their faithful exertions in that hour when death stared them in the face, and when so great was the need for coolness and courage.

Our latest information is that all the bodies but one had been recognized by the friends of the lost. The wreck is quite distinct, being less than half a mile to the west of the place where she struck, on Fisher's Island, and where there is a cove with safe anchorage.

In view of this accident, we feel sure that we shall but echo the opinion of the public, by recommending the immediate construction of the contemplated *railroad* from *New York* to *Boston*. We have an engraving of the proposed route, which we shall lay before our readers, in the next number of the Journal, with such remarks as we may deem fitting and appropriate. That *a railroad* from these two important points will be an improvement upon the Sound navigation, however well conducted, or however good may be rendered the accommodations, no one will question. The terrible loss of life and property by the destruction of the "*Lexington*" and the "*Atlantic*," calls loudly to the friends of the proposition for *a railroad* from Boston to New York, direct, to come forward and take the work in hand *energetically*; and the late frightful disaster is an argument in favor of a *land route through*, which must be appreciated!

The present time is not the appropriate moment for censure, and we would suggest no word of blame that might fall upon those who have been interested in getting up the elegant "naval palaces" which have for years plied upon Long Island Sound. We have, nevertheless, long been of the opinion that those boats have not been built sufficiently strong for thorough *sea-boats*, and that show, beauty and *speed* (more particularly) has been aimed at, rather than durability and strength.

Let us have a railroad from Boston to New York—a *land* route entire—and let the friends of the project be up and doing, forthwith. We shall allude to it particularly, and shall offer our reasons for this course, more at length, in the next number.

Kennebec and Franklin Railroad.

The Portland Advertiser says that the project of a railroad from some town on the Kennebec to the interior, so as to connect Winthrop, Readfield, and other towns with the business of our river, a project which was much talked about some years ago—is beginning again to command attention.

The Kennebec Journal adds, that such a work would be immensely important to the interior. It would afford our neighbors to the west of us, not only the facilities of a railroad communication to Boston, but connect them in daily intercourse with all the markets on the river, and with a water communication to Boston, New York, and ports farther south. All the surplus produce of this fruitful section of country could then be marketed at the highest prices *by the producer*, and avoid the expense now incurred in having them pass through other hands. We are happy to learn that measures are in progress to find out the best route for such a railroad, so that application may be made to the legislature at the ensuing session for a charter. Will our friends offer such suggestions as will facilitate the object.

Attica and Hornellsville Road.

We learn from the Rochester Democrat that the citizens of Buffalo are again agitating this subject—and considerable interest has lately been evinced in the project. The Buffalo Commercial publishes a map of the route, and points out its advantages. Several projects, says the Commercial, for connecting the great southern road with the central line have been broached, but nothing done beyond taking partial surveys. So far as we have examined the subject, we are induced to believe the route proposed by the Buffalonians, the most difficult and expensive; and that which proposes to terminate at Canandaigua, the cheapest and easiest of construction. It is doubtful, however, whether any of the proposed lines will be constructed immediately. Capitalists now a days are slow to invest in enterprizes of this kind. The legislation of this state in regard to corporations has been so fluctuating that capitalists abroad have lost confidence in New York investments. We hope for better things under the new constitution. A general law in reference to corporations will doubtless be passed, which will, we hope, be allowed to remain unchanged.

Progress of the St. Lawrence Road.

A correspondent of the Portland Advertiser, dating at Readfield, (Me.,) in a late visit to the interior, writes that for some 30 miles from Portland the earth excavations and filling in appears to be nearly completed, while the most active operations are going on with the rock excavations, and portions of the masonry. At the point near the present county bridge, where the railroad will cross the Presumpscot river, there is a particularly busy scene, a large number of horses and teams being employed in laying foundations and filling in for the abutments of the proposed railroad bridge.

"Here is a *progress*," adds the writer, "a something actually doing—which may encourage us all.

Our burden feels the lighter when we see that we are really accomplishing something of that which we have so long and anxiously looked for. This movement eastward is an important part in itself of the great consummation. Besides its encouraging assurance that it is so far a way and a *means* for pushing forward vigorously to the long desired terminus on the banks of the St. Lawrence. It is also an accomplishment of the important union with our fellow citizens east of us, in all parts of the interior. I am strongly persuaded that the very first portions of the road that shall be finished, will do an amount of business of which, at present, one can form no adequate idea."

"It is understood that the work on the new lettings will be commenced immediately, and prosecuted with all practicable despatch. If the expectations of those responsibly concerned are not disappointed, the cars may be running to North Yarmouth by the 1st of August next, and to a point near Lewiston, about three or four months later.

"This makes a most hopeful opening to the interior of the state. The 25 or 30 miles thus completed will accommodate at once, more or less directly, a very large population, who have now no other mode of transportation than the common roads. In winter it will also immediately draw a large travel from the banks of the Kennebec, and it can hardly be doubted that that section of the great road will at once pay for itself, thus very materially relieving the Montreal enterprize, and allowing the directors to go on, and prosecute that work, with new encouragement and despatch.

"The enterprize of the Kennebec and Androscoggin railroad, or the road from Lewiston to Waterville, is now attracting interest in this direction, as well as in Portland. I think it may be said that an effective commencement has been made. Preliminary subscriptions are so encouraging, that the actual opening of the books will be hastened, and the organization and location advanced with all proper speed. It is hoped that the contracts may be entered into before spring. Several public meetings have been held at Lewiston—also at Waterville, and in the villages adjacent, and a central meeting is to be holden at Winthrop, on Friday the 13th inst.—The rich and beautiful town of Readfield is immediately concerned in the enterprize. The route will pass through the town for several miles, and it is by no means improbable that it may pass quite near to their principal village, which is a very important point of transit for country passengers and goods, and a place having a large water power, not yet by any means fully occupied.

"I conclude by expressing my confident anticipations, that a few months hence, we shall see the grading actually commenced, on all the line from North Yarmouth to Waterville. I have recently passed over the whole route, and quite near to the probable lines of the road. The facilities for construction are *unequalled*. There is not a *difficulty* worth mentioning on the route. The bridge across the Androscoggin will be a great work, but engineering science will render it easy. The route for nearly the whole distance is upon the lowland margin of water courses, and for miles together by the side of beautiful lakes. The land damages, considering the actual richness of the country around, will be trifling.

"Every intelligent citizen of Portland and of Cumberland county should now consider in what way *he* can best promote this enterprize."

THE TELEGRAPH AND ITS USES.

The London Railway Chronicle says that "a tale of romance is created almost every week by the electric telegraph. A few days since it stopped a marriage. A young lady and gentleman decamped from Nottingham to have the indissoluble knot tied in Lincoln; but about an hour after the loving pair had set off, the lady's mamma, finding her daughter absent, went to the station, and ascertained that she had left for Lincoln with her lover. The telegraph was instantly set to work, and when the lady and gentleman arrived a policeman was in attendance to receive them, and the pair were forthwith taken out of the carriage, placed in a return train, and sent back to the mamma. Here is another and different application of the telegraph: a few days since a lady left her purse, containing £30 on the counter at the Witham station of the Eastern Counties. It remained unobserved by the station clerk, until the train had left; whereupon he instantly 'telegraphed' the occurrence to the Chelmsford station. On the train's arrival inquiry was made of all the lady travellers, who immediately commenced a vigorous investigation of pockets, reticules and purses, and the loss became speedily known to the careless fair one."

We find also in the same paper a statement, on the authority of a letter from Paris, dated the 20th of October, that such is the demand for *Irish laborers on French lines*, that they can earn from 5f. to 6f. a day, while the native workmen only receive from 3f. to 3½f.

It is said that Mr. Gregory, the son of Dr. Orlinthus Gregory, professor of mathematics at the royal military academy at Woolwich, and who has since distinguished himself as acting engineer of the Croydon, has been appointed engineer to the Bristol and Exeter in the room of Mr. Brunel.

The Duke of Buccleuch and Sir J. Gladstone have sold to the railway company for £90,000, their *pier at Burntisland*, together with all their rights in the Burntisland and Granton ferry. By this they will clear a profit of £35,000. This sale is conditional on the proprietors of the pier and the railway company obtaining an act sanctioning the sale of the pier and ferry to the railway.

The *Midland* and my *Lord Harborough* are said to have settled their differences. The tunnel near Stapleford Park is to be abandoned, and his lordship is to receive some £25,000 for his land used in Leicester and Rutlandshire.

From our official returns, says the Railway Chronicle, it appears that the amount of traffic for the last week, on upwards of 2,760 miles of railway, was £162,797, thus accounted for: £89,651 for the conveyance of passengers only, £40,093 for the carriage of goods, and a remainder of £23,053 for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of £21,349.

THE INFLUENCES OF RAILWAYS are felt in various ways, and in none more satisfactory to travellers on the continent, perhaps, than in doing away with, or modifying the troublesome custom house regulations. Little doubt is entertained but that the progress of railways on the continent will be the cause of an extraordinary change in the *custom house regulations*, both in France and Belgium, so complained of by the English tourists, who have to undergo the searching of the *douaniers*, or custom officers, so celebrated, if we may so speak, for their incivility to travellers.

A company has been formed in Tuscany for establishing a line from Leghorn to the frontiers of the Roman States, near Ghearone, taking advantage of the countenance given by Pope Pius to railways, who numbers among other great reforms never before dreamt of by his predecessors in the holy see, the establishment of a system of railways.

Iron Trade at Pittsburg.

A late number of the Pittsburg Gazette publishes the names of *fifty-one* furnaces for smelting iron, all located upon the Allegheny river. The list does not comprise the furnaces upon the canal—and alludes only to those which run their metal to market upon the river. The following particulars will be interesting:

"There are now 12 rolling mills, 11 in operation, and the other in market for metal. These work up 75 to 100 tons per week, say 75 all around, or 900 tons per week. Then there are the host of foundries, one of which has melted 25 tons per day, and will average probably 100 tons per week. Should the mills run full time till spring, the supply is a tolerable one, and no more: and were the new tariff not directly brought in as a weight on the market, it would speedily be cleared of all the iron on it.

"The amount of iron in the shape of pig metal and blooms annually marketed in Pittsburg is about *forty thousand tons:* all of which is here manufactured and distributed over half the union, in iron fabrics of every description.

"Probably no market out of Europe is capable of bearing so great an amount of iron at once as Pittsburg, and there is none on this continent where anything like so heavy an amount is sold in so short a time. Pittsburg is emphatically the iron city of the western world.

AMERICANS ABROAD.

We frequently see paragraphs going the rounds of the papers in relation to the operations of our countrymen in St. Petersburg. We have considered it a high compliment to American skill and enterprize that the principal engineer and machinists were selected from this country, by the Emperor of Russia, to construct his long lines of railroad, his *hundreds* of locomotives and *thousands* of cars; and we are highly gratified to learn that the progress made, in the construction of the immense works undertaken, has been fully equal to, and indeed even greater than, the anticipations of the Emperor. The following paragraph from the Railway Chronicle is in accordance with our own private information—and we congratulate Messrs. *Harrison, Winans & Eastwick* on their success.

"*St. Petersburg and Moscow.*—Messrs. Eastwick & Harrison, the engineers, late of Philadelphia, have recently passed a gigantic contract with the Russian government, for the construction of 178 locomotive engines, and 8,500 passenger carriages and goods cars, to be completed within five years. They expect to complete the contract within one year and a half of the term assigned. It is said they can turn out six cars and carriages per day all finished, and three locomotives per week.(?) The railway will be ready and open in some two or three years. Two thousand men, mostly Russians according to contract, are employed upon it, and the employment of the railway excavator engine has served greatly to accelerate progress. The engineers referred to have moved their establishment from Philadelphia to St Petersburg."

Queer Railroad Accident.

A singular accident occurred upon the Troy and Saratoga road a few days ago—which, though of a somewhat serious character, was sufficiently ludicrous. Fortunately, no person was hurt, though the passengers were a good deal jostled and much alarmed for the time being. We learn from a friend who was in the cars at the time, that the train was coming down at a slow rate, and having started away from Mechanicsville, they overtook a large bull, who was walking leisurely along the track. The knotty headed gentleman claimed the "right of

way," and the only notice he condescended to bestow upon the fiery mouthed monster behind him, was a careless leer over his shoulder, without increasing his speed at all, to the great discomfiture of the engineer, who was desirous to get on a little faster.—The whistle rang out lustily, but Mr. Bull walked on at his leisure, until the engineer, tired of the fun, put on the steam, and dashed rapidly towards the heels of his contrary friend. Mr. Bull was not to be served thus cavalierly, and turning round, he faced the train, and planted his head smack upon the front of the locomotive! The animal rolled heels over head, of course, upon the side of the track—but the concussion was so sudden, that the engine and baggage cars were thrown from the track, the former being smashed to pieces on a neighboring bank, and the latter being so badly injured as to prevent any further progress for some hours. The bull immediately arose, shook his head, and walked slowly into an adjoining field, where he lay himself quietly down, to watch further movements, while the expression upon his face seemed to say "how do you like *that*—my friend!"

The cars were finally righted up—another engine was sent down to the wreck, and the passengers proceeded on, much mortified at the result. As the train started off, Mr. Bull arose from his lounge, and turned away towards a piece of woods near by, with most provoking coolness, as if to remind his departing friends in the train, of that wholesome old adage, "the more haste the less speed!"

Sullivan Railroad.

The Boston Courier has been furnished with a copy of the annexed resolution, which was passed at a late meeting of the Vermont central railroad corporation:

VERMONT CENTRAL RAILROAD OFFICE,
Boston, November 14, 1846.

At a meeting of the directors this day holden, a communication was received from the Sullivan railroad company, which is placed on file—whereupon, on motion of Mr. Foster, it was

Resolved, That we will connect with the Cheshire and Fitchburg railroads, by a juncture with the Sullivan railroad, and that the president is hereby directed to make all necessary arrangements for establishing such a connection.

Attest: E. P. WALTON, JR.,
Clerk Vermont Central Railroad Co.

The Boston Post is informed that the Sullivan railroad, which extends from the western bank of the Connecticut river, a little south of the village of Windsor, in the state of Vermont, through a part of the town of Cornish, and through the towns of Claremont and Charlestown, and intersects the Cheshire railroad in Walpole, near Bellows Falls in New Hampshire—making a line of road a little exceeding twenty four miles, will be put under contract for construction before the 1st of January next, and will be completed within a year from that time. The farmers and other citizens of Sullivan county in New Hampshire, have subscribed to the stock of this road with great liberality. The capital stock is divided into 5000 shares, and four-fifths of that number has been taken in that county.

The managers of this road only ask for a subscription of 1000 shares, being the remaining fifth part of the capital. It is confidently believed, that if this piece of road shall be completed as suggested, we shall have, by January, 1848, an unbroken chain of railway communication between Boston and Montpelier, with the exception of that part of the Cheshire railroad between Keene and Bellows Falls. Those who are acquainted with the route of the Sullivan railroad—with the population, resources and business of that section of New England—will admit that an investment in the stock of this road will yield as profitable a return as a like investment in any other road.

The Mineral Regions.

An interesting article appears in a late number of the *New Orleans Bulletin*, in reference to the mineral resources of the state of Wisconsin. Dr. Owen declares that that vicinity contains the richest mines of ore, and particularly of *lead*, which are inexhaustible. He supposes the state capable of yielding 150,000,000 pounds of lead, *annually*, which is more than is now furnished by the *entire mines* of Europe. That state may well be called *the lead region of the world*. The Bulletin says:—

"Mr. Owen's observations in 1839, on the copper of Wisconsin, fully accord, so far as they go, with the wonderful disclosures that have recently been made. He then predicted from his geological knowledge, that richer mines of copper would be found in the northern parts of Wisconsin, where the igneous, metamorphic, crystalline rocks come to the surface, these being the rocks which in Conwall, England, produce copper. The north parts of Wisconsin, on lake Superior, have since been explored, and the most incredible quantities of copper, mingled with silver, have been found. The dip of the rocks in Wisconsin being south, the lowest strata would be found to the north. The copper ore of Wisconsin is about one-third richer than that of England; indeed, European mines, which afford only three per cent. of copper, pay for the working, after raising the ore from a depth of more than 2000 feet—a fact showing the immense value of the Wisconsin mines.

"Zinc is also found in vast quantities among the lead and copper, in the form generally, of an anhydrous carbonate. The miners call it 'dry bones,' from its resembling the cellular substance of bone. Sometimes a vein of lead becomes entirely a vein of zinc, and then the unscientific workmen declare that the 'dry bones have eaten out all the mineral.' It is regarded as quite worthless by the miners, and considered a nuisance. Thousands of tons of it are thrown away by them, as a worthless drug. It is a true carbonate of zinc, and contains about forty-five per cent. of pure metal. When it is considered that vast quantities of zinc are imported into this country from Europe, it is a matter of surprise that so much of it should be annually thrown away in Wisconsin. How important an article of commerce zinc is, may be inferred from the fact, that there are about six millions of pounds annually imported into England. Its use in the arts is very extensive.—From 13 to 25 per cent. of all brass, is zinc. The mines of Wisconsin would probably supply the world with zinc.

"In iron, also, Wisconsin is equally rich; but the iron, like zinc, is a drug. Indeed, for some reason or other, it is thought better to import from England into this country, millions of dollars worth of iron, when we have literally mountains of it here, in every direction, with the most unparalled facilites for its manufacture. In the production of iron, lead, copper, zinc, all the more useful metals, we might rival the world.

"Wisconsin, in respect to natural advantages, is scarcely rivalled by any state in the Union. It is not only immensely rich in mineral wealth, but is mostly a region of fertile soil, capable of yielding an unlimited supply of agricultural products common to that latitude, and of engaging in manufactures to any extent. Its numerous streams affords an immense water power; and with the largest lake in America on the north, lake Michigan on the east, and the Mississippi on the southwest, its facilities for commerce are not surpassed. Like an island in the ocean, it is bounded on every side by navigable waters, and its products, of whatever kind, can float with equal ease to the Gulf of Mexico, or the waters of the Atlantic."

Canals and Railroads.

In a recent article, published in the Boston Courier, upon the trade of the west—and the future course it must take—the writer considers that the Ogdensburg and lake Champlain railroad will be the most favorable avenue. Referring to the works through the centre of our state, he says: "These canals being the property of the state, are subject to heavy tolls, over and above the freight and other charges. The central railroads which run parallel with these canals, are under *restrictions* which prevent their taking any freight except in *winter*, and then subject to canal tolls *as tribute* to the state; the time the canals are closed by winter being usually over four months."

A correspondent in the Albany Journal comments as follows upon this paragraph:

"This is a very forcible commentary upon the existing policy in respect to our canals and railroads through the centre of the state. At a distance, where the thing is looked at practically, and the best mode of avoiding the impositions placed upon the canals and the central railroads is considered, they conclude to furnish the capital necessary to establish a line of railroad from Ogdensburg to Boston. Suppose this measure thus suggested shall by our policy be carried out, and become a great avenue for transportation, how much is the state of New York to be benefitted?

"The state of Ohio has just reduced the tolls on the canal from Cleveland to the Ohio river, in order to compete with the Wabash and Erie canal, which comes in at Toledo. That reduction immediately induced the sending off a large quantity of our salt, which had been accumulating at Cleveland, and could not before be sent off in consequence of the tolls. The restrictions upon the central line of railroad, prohibiting the transportation of freight except in winter, and 'the tolls as tribute to the state,' are operating very unfavorably upon all the central parts of the state. To them as to all persons producing a surplus, it is of first importance to have cheap transportation. This tribute, if paid at all, is paid by the farmer whose wheat or flour is sent over the railroad. Precisely as much as the rate of transportation is thereby increased, is the price for his property reduced. In addition, he pays an increased price for whatever he purchases that is brought over the railroad. In short, the farmer, the producer, the manufacturer and the laborer, pay this *tribute*. Though nominally imposed upon the railroad company, yet it forms part of the price of transportation, and thus comes back, to reduce by so much the price of the bushel of wheat, and to enhance by so much the cost of the pound of sugar, or the gallon of molasses.

"Ought we not to see to it, and have these restrictions and this tribute removed? We have a right to an unrestricted avenue to market. The only interest that railroad companies can have in the question is, that by doing a much larger business at lower rates,

while deriving a compensation upon capital equal to their present dividends, they will come to be regarded with more general favor. Their business cannot increase without its being to the interest also of those whose property they transport. They should be allowed to carry as low as they can, and then all can participate. If this course leads to reduced prices upon the canal, the farmer and the laborer are the gainers thereby."

English Patents.

We find the following accounts of English patents, recently secured, in the Civil Engineer and Architects Journal:

LOCOMOTIVE ENGINES.

George Stephenson and William Howe, "Improvement in locomotive steam engines."—Granted February 11; *Enrolled August* 11, 1846.

The improvement consists in the application of three steam cylinders to locomotive engines, two to be of the same diameter and capacity, and together to be equal in capacity to one large cylinder. The pistons of all the three cylinders are to move simultaneously in the same direction; the large cylinder is to be placed exactly in the longitudinal central line of the engine, and the other two cylinders on each side at equal distances from it. The piston of the centre cylinder is to drive a crank on the axle of the impelling wheels, and the pistons of the two smaller cylinders are to be connected with crank pins fixed on the naves of the driving wheels; the crank to be fixed at right angles to the crank-pins.—The intention of this arrangement is to neutralise any tendency that the oblique action of the connecting rods on their crank-pins may have to produce a lateral vibration on the supporting springs of a locomotive when travelling very rapidly.

RAILWAY SAFETY BUFFER.

Edwin Chesshire, of Birmingham, for "Improvements in apparatus to be applied to railway carriages to reduce the prejudicial effects of collision to passengers in railway carriages."—Granted February 3; *Enrolled August* 3, 1846.

The apparatus consists simply of a strong straight inflexible rod of either iron or wood, or both combined, placed longitudinally under the centre of the carriages; the ends of the rod are to have enlarged heads, and the length of the rod to be somewhat less than the carriage, to which it is attached, and the buffers when in ordinary contact. This rod, which the inventor calls a "safety buffer," is not intended to have any effect in stopping the motion of the train in the usual manner, but only when a violent collision, either before or behind occurs—then the heads of all the bars will be brought in contact, and "form one straight, inflexible, unyielding bar," by which means the effect of the collision will be neutralised.

CEMENT.

John Keating, for "Improvements in the manufacture of cement."—Granted February 11; *Enrolled August* 11, 1846.

This invention consists in mixing borax with gypsum (sulphate of lime) in the following proportions:—5 lb. of borax and 5 lb. of crude tartar are each to be dissolved in 6 gallons of water, and when dissolved the two solutions to be mixed together. Gypsum in lumps (first deprived of its water of crystallization by heat) is to be put in this solution till it has absorbed as much as it will take up, and then put in an oven and heated red hot; afterwards it is allowed to cool, and ground, and then again mixed with the above solutions and heated in an oven; when taken out, it will be ready for use.

IRON MANUFACTURE.

James Palmer Budd, of Yslalyfera Iron Works, Swansea, for "Improvements in the manufacture of iron."—Granted February 31; *Enrolled August* 11, 1846.

In burning coal, clinkers are produced and considered as refuse; these clinkers, it is proposed to apply in the manufacture of iron; they may be obtained where large quantities of coal are burned in furnaces, or from smith's fires and waste heaps of small coal, and also from refuse ash heaps of many works which have fired and burned down, leaving a substration of clinkers near the bottoms of the heaps.

As clinkers are of a light porous nature, of small specific gravity, and contain a large proportion of earthy matter, they will be found peculiarly suitable for use in blast furnaces, with rich oxides of iron, cinders obtained in the manufacture of malleable iron, hemæteter iron ores. The clinkers when mixed with the rich oxides of iron in the blast furnace will lessen the density of the mass and allow a freer passage for the blast, and supply the proportion of earthy matters required for the perfect separation of the iron.

In charging the blast furnace the clinkers are generally to be combined with rich iron stone, iron cinder, or ore in proportion to the quality of the clinkers; if rich in iron ore a smaller quantity is required than when they are comparatively poor; the proportion of iron in the blast must be below 50 per cent., from 40 to 45 per cent. is the usual proportion. If the clinkers contain less than 45 per cent. of iron, then a richer material, such as cinders of malleable iron or rich iron ore is to be used therewith. When the furnace is charged, the usual fuel and fluxes are to be used with the ore and clinkers.

TELEGRAPH LINE TO CINCINNATI.

"Negotiations have been for some weeks in progress for extending the lightning line from Pittsburgh to this city, connecting us in that way with Philadelphia, New York, Boston, and Washington city. Mr. Case, late editor of the Enquirer, is about to visit Washington city, on that business, and we have full confidence that he will complete the arrangements, either for constructing a line from Baltimore, by way of Cumberland, to Wheeling, etc., or for connecting with the Philadelphia line at Pittsburgh. The importance of this communication is duly appreciated in this business community, and we may reasonably expect that the work to this city will be completed in six or eight months. When these arrangements are completed, it is designed also to extend the line from this city, by way of Louisville, Nashville, Vicksburg, etc. to New Orleans. The line through Ohio must be completed ere long. Shall we have aid from Dayton, Columbus, Zanesville, Wheeling?"

The above we extract from a late number of the Cincinnati Gazette. Mr. Case is a man of nerve, and excellent business qualifications, and we doubt not that he will expedite this matter towards an early completion. Mr. C. is brother-in-law to the Hon. F. O. J. Smith, a gentleman well known as being largely interested in the Telegraphic lines *first* established, and to whom the public is deeply indebted for the establishment of this great improvement.—We wish Mr. Case all possible success in his new business, believing that few men could be found whose reputation would better ensure success in the great objects to be attained in this important undertaking.

RAILROAD MEETING.

A meeting was held on Monday week, at Groton, by the friends of Stony Brook and Worcester and Nashua railroad, says the Lowell Courier, for mutual conference in relation to the location of the roads. Several gentlemen were present from Worcester, Nashua, Pepperell, and Lowell, among whom was ex-Governor Davis, president of the Nashua and Worcester road. It was considered important by the friends of the Stony Brook road, that a junction should be formed with the Nashua and Worcester at a point where that road would cross or intersect with the Fitchburg road, and if possible to avoid the necessity of using the Fitchburg. This desirable object can be obtained by running the Stony Brook up to near schoolhouse No. 12, in Groton. At this point it will also intersect with the Townsend and Peterboro' road, as well as with the Fitchburg. The whole distance from North Chelmsford to this contemplated junction is about 12 miles, which would be the length of the Stony Brook road.

We now hope our citizens will take hold of this enterprize and build the road with as little delay as possible. The whole line of the Worcester and Nashua road is under contract, and it will be all graded by a year from next January. Such, we understand, are their terms of contract. If the stock for the Stony Brook is now taken up, we may, in about a year and a half, have a continuous line of railroad from our city to Albany in the west, and Portland in the east, and with several other places which cannot fail to add vastly to our wealth and to the increase of business and population.

Miscellaneous Items.

Heavy Trains.—Two luggage trains passed by the Rugby station on Saturday last, on the London and North Western railway—one of which consisted of 96 carriages, containing nearly 400 tons of goods, impelled by one of Stephenson's six wheel engines, and two others; the other train consisted of 84 carriages, and contained 384 tons of merchandize, etc., drawn likewise by three engines. The length of the first train was upwards of a quarter of a mile.

On the Reading railroad this would have been considered a *small* load for *one* engine.—[Ed. Railroad Journal.]

A curious fraud has just been brought to light in the village of Firmi, near Rodez. Firmi is situated over an extensive coal mine, and almost every inhabitant of the village had, it seems, dug down to the coal, and used as much of it as pleased him, without the permission or the knowledge of the lessees of the mine. The accidental death of a miner

in one of the concealed pits lead to the discovery of the fraud.

Spontaneous Sounds in Iron and Stone.—Singularly illustrative of the much disputed property, affirmed by the ancients, of the sound emitted at sunrise by the statue of Memnon, in Lower Egypt, is the singular phenomenon of sound occasioned by the vibration of soft iron produced by a galvanic current. It was first discovered by Mr. Sage, and has been since verified by the observations of a French philosopher, M. Marian. The experiments were made on a bar of iron, which was fixed in the middle in a horizontal position—each half being inclosed in a large glass tube, around which were wound spirals of copper wire. A cord of copper wire was afterwards substituted for the two helices, and placed with its axis coincident with the axis of the bar. On completing the circuit, the longitudinal sound, although feeble, could be distinguished—the bar of iron being a little lengthened or expanded in the direction of its axis. The origin of the sound has, therefore, been attributed to a vibration in the interior of the iron bar, or a new arrangement of the molecules.—*Mining Journal.*

On the 3d of next month, says a French paper, the minister of marine will receive contracts for the supply of 36,000,000 kilogrammes of coal for Toulon.

The provincial newspapers mention that the works on one section of the Orleans and Bordeaux railway were delayed for a long time, on account of the want of rails. At last when the supply did arrive, it was only 3,000, instead of 13,000, and no chairs whatever were sent. The iron masters stated, that so many orders pressed upon them, that it was absolutely impossible for them to fulfil their contract.

The Lyon and St. Etienne journals state, that the coal pits of the department of the Loire are being worked with great activity. Some improvements in the manner of working have been borrowed from English mines with great success. A plan has also been discovered of utilizing the small coal and dust created in the mines, by turning it into coke. Formerly it was either left at the bottom of the pits, or sold at a dead loss. If mixed with pitch, heated to a certain point, and heavily pressed, the small coal is transformed into a material which emits a greater degree of heat than ordinary coal.

The number of locomotives in use in 1844, on the French railways, was 168 of French construction, and 117 of foreign, [English.] In 1842, the number of French locomotives was equal to that of the foreign; in 1843, there was an increase of two in favor of the French; in 1844, the advantage was 41. For 1845, the increase of the French was still more remarkable, and this year it is yet greater.

The marquis de Boissy has sold the extensive iron works of Kerzon, Clavieres, and Kislen, to M. Aubertot, for the sum of 3,250,000fr. or £150,000. He retains those of Burges and Rosieres. These establishments have been hitherto known as those of Berry.

Production of Coal in Belgium.—From the official returns of the engineers of mines, we find that the 3 great coal provinces of Belgium produced, in 1845, 4,960,077 tons—of which Hainault gave 3,671,023 tons; Liege 1,127,181; Namur 161,873 tons. The present produce of the Belgium mines exceed by 1,177,338 tons that of France, and Hainault alone yields within 111,000 tons as much coal as the whole of the French mines put together. If they are attempting to work the coal basins of France on a large scale, to avoid the obligation of importing foreign coals, so superior to their own in quality, and to be obtained at less cost, the proprietors of the Belgian quarries are on the *qui vive*; and as several very considerable seams of excellent quality have lately been discovered, for the working of which concessions have lately been granted, the owners will be enabled to export it, at even a less price than at present.—*Mining Journal.*

The Railroad to the Pacific.—A public meeting, called by the chamber of commerce of Cincinnati, was held in that city on Friday, and a committee was appointed to draft a memorial to congress in favor of Mr. Whitney's plan. That gentleman was present and addressed the meeting.—*Balt. Repub.*

Little Schuylkill Road.—The Pottsville Gazette says that the Little Schuylkill railroad company are about laying a new iron track with heavy rail, over their road, under the direction of Mr. Adams, engineer. They are already putting down the sills, and will commence laying the rails as soon as they can get the iron. The road is about 20 miles in length from Tamaqua to its junction with the Reading railroad, at Port Clinton. At present, the company intend laying only a single track, with three turnouts. This track will run parallel with the old wooden track, which still remains in use, although in a very dilapidated condition. The rails for this new road are being made at the rolling mills of Messrs. Reeves, Whittaker & Co., Phœnixville. We understand that these gentlemen are filling their contract at the rate of 40 tons per week.

Extension of the Telegraph.—A card appears in the Philadelphia journals, over the signature of Henry O'Reilly, in which it is stated that the "Atlantic, Lake and Mississippi telegraph" will be in successful operation as far as the Ohio river by the first of January next. The writer adds: "A substantial 'iron cord,' is now stretched from Philadelphia beyond Chambersburg, and the advanced parties in constructing the work will be at the Ohio river on the 1st of December. The extension of the line thence to Cincinnati, Louisville, and St. Louis, as well as to cities on the lakes will be prosecuted with steady energy, unchecked by winter storms or other obstacles,—active operations having also been commenced along the lake line; and every effort will be made by my associates, as well as myself, to complete the connection between the 'Atlantic and the Mississippi' in the shortest practicable time and in a manner most satisfactory to the public."

Fatal Effects of Gas.—The writer of an obituary notice of Mrs. M. G. Bull, of Westfield, Mass., in the News Letter, gives the following as the cause of her death:

"In August last, she spent a night at a hotel in Boston; her sleeping room was lighted by gas; not knowing the proper mode of extinguishing it, she succeeded in blowing it out, but left the gas running in the room all night; unless a window had been left up, she would undoubtedly have perished. When she awoke, her lungs were oppressed, and respiration difficult. The following day she ascended to the top of the State House and to the top of Bunker Hill monument, and soon after had a slight hœmorrhage from the lungs. October 6th she bled copiously, and continued to do so each day until the 14th, and died on the 26th."

Rotary Steam Engines.—The New York Sun says that a successful attempt has been made to perfect a *rotary* steam engine; "the engine alluded to is the result of many years' labor and investigation by Dr. Schnebley, the editor of the Hagerstown, Md., Pledge. Celebrated engineers in this country, as well as in England and France, have given the most favorable opinions of it. From the experiments that have been made with a small engine of one and a half horse power, it is said the discovery will rank equal to Watts. For steamboats, locomotives and factories, the rotary engine is a desideratum; for it occupies only one-tenth the space, and saves at least one-fourth the fuel required for an engine built in the ordinary mode. Advantages so important as these will be appreciated by every person interested in machinery."

The Sandwich observer says that that portion of the Cape Cod branch railroad running from Sandwich to Monument, is under contract to be built—and will be pushed on to completion vigorously.

The Bunker Hill Aurora, speaking of the *Sullivan* road, to which allusion is made in another portion of this week's Journal, says that the towns on the line of the Sullivan railroad have done nobly in its behalf, but we learn that some further subscriptions are necessary to enable the corporation to commence work with the strength and energy desirable. The town of Claremont, we learn, has subscribed $100,000, and the town of Charlestown nearly as much. This road is the connecting link between the Fitchburg and Cheshire and the Vermont Central railroads, and the stockholders in these companies are deeply interested in its success.

St. Andrews and Quebec Road.—The Calais Advertiser learns that there was a very numerous and respectable meeting held at St. Andrews, on Wednesday week, for the purpose of deciding what course should be pursued—the sum of £25,000 having been subscribed for the above purpose; and consequently under the act of the province of New Brunswick, for the encouragement of this undertaking, the subscribers being authorized to call a meeting of the stockholders for the purpose of choosing directors, who shall take such measures as may be required, by survey and otherwise, previous to the commencement of the work, and to obtain subscribers for the remainder of the stock; the amount which will probably be required to complete the train to Woodstock, a distance of only 70 miles, being estimated at £70,000. The provincial legislature standing pledged by vote of the assembly, for the payment of £10,000 annually, for the first ten years after the railway shall have been completed.

Railroad Travelling.—A London letter writer says: "In England—railroad travelling although exceedingly expensive for first places, $5 per hundred miles, is vastly more comfortable and speedy than anywhere else. From London to Exeter, via Bristol, 220 miles, the distance, including stoppages, is regularly run over in four hours and a half! Between Liverpool and London, the line is about the same length, and the express cars go through in about six hours."

Silent carriage wheels have made their appearance in London. The tire of the wheels consists of an elastic tubular ring of caoutchouc, enclosed in a leathern case, and inflated with air to any degree of tightness desired. The motion of the carriage is exceedingly easy.

Wm. G. Farmer, locomotive engineer on the Little Miami railroad, was killed near Springfield, Ohio, on the 7th inst., by being struck on the head by the reversing lever of his engine.

RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.

Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

TEST No. 10.

Certificate from Mr. Silas C. Field, of Vicksburgh, Mississippi.

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, iquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited. S. C. FIELD.

TEST No. 11.—*Certificate.*

By the fire which occurred in this village on the 27th July last, our Law Office, together with many other buildings, was destroyed—we had in our office one of Rich's *Improved* Patent Salamander Safes, which, though heated red hot, preserved, without being the least damaged, many papers valuable to our clients—the envelopes of a few papers being *slightly* scorched. Some twenty-four hours after the fire, the Safe was removed, and so hot was it, that several hours were required for it to cool off. Our office was in the second story of a large brick building, all the wood used in construction of said house being *pitch pine.* While the Safe was red hot, one of the walls tumbled in, and so injured the lock that it was necessary to break the door open. From this test, we feel no hesitancy in recommending "Rich's Patent Salamander Safe" as *entirely fire proof.*

GOREE & KING.

Marion, Ala., Sept. 15th, 1846.

Still other Tests in the Great Fire of July 19, 1845.

The undersigned purchased of A. S. Martin, No. 138½ Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was parched by the extreme heat. RICHARDS & CRONKHITE.

Benton, Miss., December 27, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138½ Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards. (Signed,)

WM. BLOODGOOD.

New York, 21st July, 1845.

Reference made to upwards of nine hundred and fifty merchants, cashiers, brokers, and officers of courts and counties, who have Rich's Safe's in use.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from $50 to $500 each. For sale by

A. S. MARVIN, General Agent,
138½ Water st., N. Y.

Also by Isaac Bridge 76 Magazine street, New Orleans.

Also by Lewis M Hatch, 120 Meeting street Charleston, S. C. 16 tf

FRENCH AND BAIRD'S PATENT SPARK ARRESTER

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms. *Philadelphia, Pa., April* 6, 1844.

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
a15 Paterson, N. J., or 60 Wall street, N. York.

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, *Agent.*

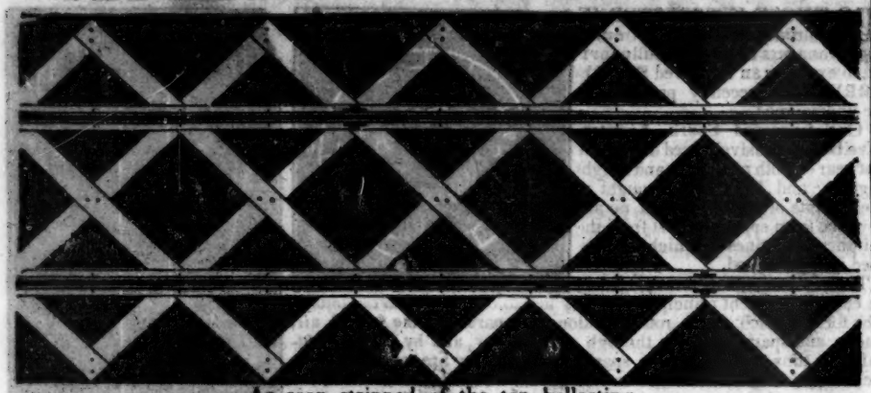
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufcturing so as to keep pace with the daily increasing demand. ja45

DAVENPORT & BRIDGES CONTINUE to Manufacture to Order, at their Works, in Cambridgeport, Mass., Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any patterr and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes. 1y1

THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

THE UNDERSIGNED RESPECTFULLY invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.

4,224 Timbers, 11 ft. long, 3 x 6 inches = 68,696 ft. b.m., at $10 =	$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. = 4,403 ft. b.m., at $13 =	57 24
13,000 Spikes = 2,250 lbs. at 4½ cts	101 25
Workmanship free of patent charge	600 00
Cost of one mile including the laying of the Rail	$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON.
Civil Engineer and Patentee.
No. 277 South Tenth St., Philadelphia. 33tf

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information requi[red] respecting the different descriptions and application will be given by

ALFRED L. KEMP,
75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.				CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.			Weight per fathom.	Diameter of iron	Tons.
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.		LBS.	INCH.	
11	4¼	13	5	10	21	–		50	15-16	20
13	3¼	8	3	8¼	16	–		27	11-16	13¼
14	3¼	6	11	7¼	12	8		17	9-16	10¼
15	2¾	5	2	6¼	9	4		13¼	1-2	7¼
16	2¼	4	3	6	8	8		10¼	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24